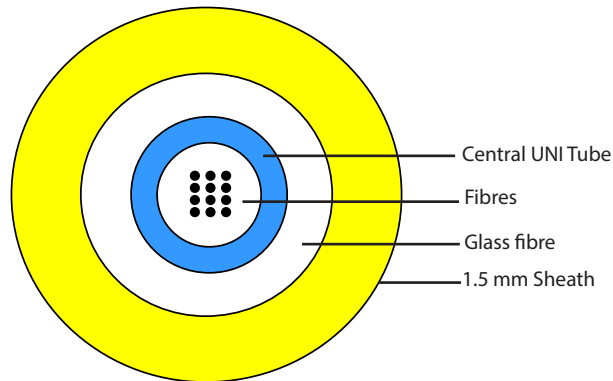


Optic fibre cable OS2 - loose tube indoor/outdoor

- 2 fibres Cat. No(s): 0 322 86
- 16 fibres Cat. No(s): 0 322 92

- 8 fibres Cat. No(s): 0 325 03
- 4 fibres Cat. No(s): 0 325 02

- 6 fibres Cat. No(s): 0 325 12
- 12 fibres Cat. No(s): 0 325 14
- 24 fibres Cat. No(s): 0 325 51



Central UNI Tube
Fibres
Glass fibre
1.5 mm Sheath

1. APPLICATION AND INSTALLATION

This cable can be used for LAN and WAN backbones, telecom access lines, fibre to business and fibre to the building drop connections : as well as fibre to the home drop and access connections.

With its LSZH sheathing this cable is ideal for mixed indoor and outdoor installation.

It is equally suited for installation in ducts and on trays. This cable features a high tensile strength and a degree of rodent protection, effective in many cases.

2. CABLE TECHNICAL SPECIFICATIONS

2.1 Standards

ISO 11801 2nd edition
EN 50173-1
IEC 60794-1

2.2 Construction

Loose tube	Ø 2.8 mm jelly filled loose tube with 2-24 fibres	
Fibre colour code	1 Blue	13 Blue w/mark every 70 mm
	2 Orange	14 Orange w/mark every 70 mm
	3 Green	15 Green w/mark every 70 mm
	4 Brown	16 Brown w/mark every 70 mm
	5 Grey	17 Grey w/mark every 70 mm
	6 White	18 White w/mark every 70 mm
	7 Red	19 Red w/mark every 35 mm
	8 Black	20 White w/mark every 35 mm
	9 Yellow	21 Yellow w/mark every 35 mm
	10 Purple	22 Purple w/mark every 35 mm
	11 Pink	23 Pink w/mark every 35 mm
	12 Aqua	24 Aqua w/mark every 35 mm
Strength member	Glass yarns	
Sheath	1,5 mm sheath, UV stabilised, LSZH, IEC 502900-2-27	
Sheath colours	Cable with OS2 fibres : Yellow	

Optic fibre cable OS2 - loose tube indoor/outdoor**- 2 fibres Cat. No(s): 0 322 86****- 16 fibres Cat. No(s): 0 322 92****- 8 fibres Cat. No(s): 0 325 03****- 4 fibres Cat. No(s): 0 325 02****- 6 fibres Cat. No(s): 0 325 12****- 12 fibres Cat. No(s): 0 325 14****- 24 fibres Cat. No(s): 0 325 51****2.3 Fire rating**

IEC 60332-1-2	Single vertical wire test
IEC 60332-3-24	Bunched vertical wires test
IEC 60754-1	No halogens
IEC 60754-2	No acid matters
IEC 61034-2	No dense smoke
EN50399	Class Dca s2, d2, a1 ; Class Eca

2.4 Physical properties

Property	IEC 60794-1-21/22 Method	Value
Nominal outer diameter	-	7,3 mm
Nominal weight	-	55 kg/km
Maximum installation tensile strength	E1	3000 N
Permanent tensile strength	E1	1000 N
Compressive strength (crush)	E3	3500 N/100 mm
Impact	E4	20 Nm (no attenuation change, no broken cable elements)
Torsion	E7	5 cycles ± 1 turn
Kink	E10	The cables do not form a kink when a loop is drawn together to a diameter of 100 mm
Min. Bending radius, unloaded	E11	R = 73 mm
Min. Bending radius, loaded	-	R = 146 mm
Temperature range	F1	Storage : - 40°C to + 60°C (short term up to + 70°C)
		Installation : -15°C to + 40°C
		Operation : - 30°C to 70°C
Water penetration	F5B	No water on free end
Heat of combustion	-	1100 MJ/km

2.5 Marking and packaging

Marking of the cable :

- Legrand
- Part number
- Description
- Euroclass : Dca s2, d2, a1
- Date code
- Batch number
- Measurement (remaining length in meters)

Catalogue number	0 325 02	0 325 12	0 325 03	0 325 14	0 325 51	0 322 86	0 322 92
Description	4 fibres OS2 LT In/Out LSZH	6 fibres OS2 LT In/Out LSZH	8 fibres OS2 LT In/Out LSZH	12 fibres OS2 LT In/Out LSZH	24 fibres OS2 LT In/Out LSZH	2 fibres OS2 LT In/Out LSZH	16 fibres OS2 LT In/ Out LSZH
Colour	Yellow Ral 1018	Yellow Ral 1018	Yellow Ral 1018	Yellow Ral 1018	Yellow Ral 1018	Yellow Ral 1018	Yellow Ral 1018
Puck (m)	2000	2000	2000	2000	2000	2000	2000
Packaging	Reel	Reel	Reel	Reel	Reel	Reel	Reel

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3. FIBRES TECHNICAL SPECIFICATIONS

This enhanced low macro bending sensitive, low water peak fibre, gives very good bending performance. The preferred use of this low macro bend-insensitive fibre is in access networks.. The low macro bend -insensitive fibre, offers reduced bending radii for many cables types ; The fibre fulfils the new ITU G.657 A1 specification, as well as G. 652 D. The low macro bending sensitivity further guarantees that the 1625 nm window (L-band) will be available for future use in this bandwidth hungry environment.

3.1 Standards and Norms

IEC/EN 60793-2-50 Category B-657.A1 and B-652.D
ITU Recommendation G657.A1 and G.652.D
EN 50 173-1 Category OS2 and OS1a
ISO/IEC 11801 Category OS2 and OS1a

3.2 Attenuation (of cable with fibres) - IEC 60793-1-40

Maximum attenuation value of cable in the interval 1310nm-1625nm*	≤ 0.39 dB/km
Maximum attenuation value of cable at 1550 nm	≤ 0.22 dB/km
Local discontinuity at 1310 and 1550 nm	Max. 0.1 dB

* Including H2-ageing according to IEC 60793-2-50, type B.1.3 @ 1383 nm

3.3 Attenuation variation vs bending

Attribute	Measurement method	Units	Limits
Macro bending loss 100 turns on a mandrel R = 30 mm, @1625 nm 10 turns on a mandrel R = 15 mm, @1550 nm 10 turns on a mandrel R = 15 mm, @1625 nm 1 turn on a mandrel R = 10 mm, @1550 nm 1 turn on a mandrel R = 10 mm, @1625 nm	IEC/EN 60793-1-47	dB	≤ 0,05 ≤ 0,25 ≤ 1 ≤ 0,75 ≤ 1,5

3.4 Optical properties

Attribute	Measurement method	Units	Limits
Chromatic dispersion coefficient : In the interval 1285 nm – 1330 nm At 1550 nm At 1625 nm	IEC/EN 60793-1-42	ps/km • nm	≤ 3 ≤ 18 ≤ 22.0
Zero dispersion wavelength, λ_0		nm	1300 - 1324
Zero dispersion slope		ps/(nm ² • km)	≤ 0.092
Cut-off wavelength	IEC/EN 60793-1-44	λ_{cc} nm	≤ 1260 *
Mode field diameter at 1310 nm	IEC/EN 60793-1-45	μm	9.0 ± 0.4
Mode field diameter at 1550 nm		μm	10.1 ± 0.5
Polarisation mode dispersion (PMD) coefficient, cabled	IEC/EN 60793-1-48	ps/√km	≤ 0.1
PMD _Q Link Design Value (calculated with Q=0,01%)	IEC/EN 60794-3	ps/√km	≤ 0.06

* guaranteed value according to the ITU-T (ATM G650) method

3.5 Group index of refraction - IEC 60793-1-22

Effective group index at 1310 nm	1.467
Effective group index at 1550 nm	1.467
Effective group index at 1625 nm	1.468

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Attribute	Measurement method	Units	Values
1310 nm	-	dB	- 79.4
1550 nm	-		- 81.7
1625 nm	-		- 82.5

3.7 Geometrical properties

Attribute	Measurement method	Units	Limits
Cladding diameter	IEC/EN 60793-1-20	µm	125 ± 0.7
Cladding non-circularity	IEC/EN 60793-1-20	%	≤ 0.7
Core - cladding concentricity error	IEC/EN 60793-1-20	µm	≤ 0.5
Primary coating diameter - ColorLock ^{XS} and natural	IEC/EN 60793-1-21	µm	245 ± 10
Primary coating non-circularity	IEC/EN 60793-1-21	%	≤ 5
Primary coating-cladding concentricity error	IEC/EN 60793-1-21	µm	≤ 12

3.8 Mechanical properties

Attribute	Measurement method	Units	Limits
Proof stress level	IEC/EN 60793-1-30	GPa	≥ 0.7 (≈ 1%)
Strip force (average)	IEC/EN 60793-1-32	N	$1 \leq F_{\text{average, strip}} \leq 3$
Strip force (peak)	IEC/EN 60793-1-32	N	$1.2 \leq F_{\text{peak, strip}} \leq 8.9$
Dynamic fatigue resistance aged and unaged	IEC/EN 60793-1-33		Nd ≥ 20